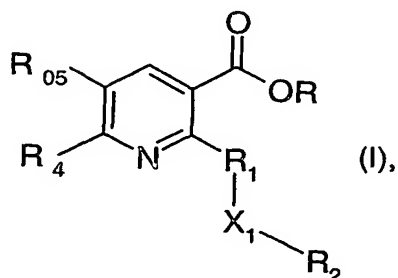


What is claimed is:

1. A process for the preparation of a compound of formula I



wherein

R is C<sub>1</sub>-C<sub>6</sub>alkyl;

R<sub>05</sub> is Hydrogen, C<sub>1</sub>-C<sub>3</sub>alkyl, C<sub>1</sub>-C<sub>3</sub>haloalkyl or C<sub>1</sub>-C<sub>3</sub>alkyl-C<sub>1</sub>-C<sub>3</sub>alkoxy;

R<sub>1</sub> is a C<sub>1</sub>-C<sub>6</sub>alkylene, C<sub>3</sub>-C<sub>6</sub>alkenylene or C<sub>3</sub>-C<sub>6</sub>alkynylene chain which may be substituted one or more times by halogen and/or by R<sub>5</sub>, the unsaturated bonds of the chain not being attached directly to the substituent X<sub>1</sub>;

R<sub>4</sub> is C<sub>1</sub>-C<sub>4</sub>haloalkyl;

X<sub>1</sub> is oxygen, -O(CO)-, -(CO)O-, -O(CO)O-, -N(R<sub>6</sub>)-O-, -O-NR<sub>17</sub>-, thio, sulfinyl, sulfonyl, -SO<sub>2</sub>NR<sub>7</sub>-, -NR<sub>18</sub>SO<sub>2</sub>-, -N(SO<sub>2</sub>R<sub>18a</sub>)-, -N(R<sub>18b</sub>)C(O)- or -NR<sub>8</sub>-;

R<sub>18a</sub> is C<sub>1</sub>-C<sub>6</sub>alkyl;

R<sub>2</sub> is hydrogen or C<sub>1</sub>-C<sub>6</sub>alkyl, or is a C<sub>1</sub>-C<sub>8</sub>alkyl, C<sub>3</sub>-C<sub>6</sub>alkenyl or C<sub>3</sub>-C<sub>6</sub>alkynyl group which may be substituted one or more times by substituents selected from halogen, hydroxy, amino, formyl, nitro, cyano, mercapto, carbamoyl, C<sub>1</sub>-C<sub>6</sub>alkoxy, C<sub>1</sub>-C<sub>6</sub>alkoxycarbonyl, C<sub>2</sub>-C<sub>6</sub>alkenyl, C<sub>2</sub>-C<sub>6</sub>haloalkenyl, C<sub>2</sub>-C<sub>6</sub>alkynyl, C<sub>2</sub>-C<sub>6</sub>haloalkynyl, C<sub>3</sub>-C<sub>6</sub>cycloalkyl, halo-substituted C<sub>3</sub>-C<sub>6</sub>cycloalkyl, C<sub>3</sub>-C<sub>6</sub>alkenyloxy, C<sub>3</sub>-C<sub>6</sub>alkynyloxy, C<sub>1</sub>-C<sub>6</sub>haloalkoxy, C<sub>3</sub>-C<sub>6</sub>haloalkenyloxy, cyano-C<sub>1</sub>-C<sub>6</sub>alkoxy, C<sub>1</sub>-C<sub>6</sub>alkoxy-C<sub>1</sub>-C<sub>6</sub>alkoxy, C<sub>1</sub>-C<sub>6</sub>alkoxy-C<sub>1</sub>-C<sub>6</sub>alkoxy-C<sub>1</sub>-C<sub>6</sub>alkoxy, C<sub>1</sub>-C<sub>6</sub>alkylthio-C<sub>1</sub>-C<sub>6</sub>alkoxy, C<sub>1</sub>-C<sub>6</sub>alkylsulfinyl-C<sub>1</sub>-C<sub>6</sub>alkoxy, C<sub>1</sub>-C<sub>6</sub>alkylsulfonyl-C<sub>1</sub>-C<sub>6</sub>alkoxy, C<sub>1</sub>-C<sub>6</sub>alkoxycarbonyl-C<sub>1</sub>-C<sub>6</sub>alkoxy, C<sub>1</sub>-C<sub>6</sub>alkylcarbonyl, C<sub>1</sub>-C<sub>6</sub>alkylthio, C<sub>1</sub>-C<sub>6</sub>alkylsulfinyl, C<sub>1</sub>-C<sub>6</sub>alkylsulfonyl, C<sub>1</sub>-C<sub>6</sub>haloalkylthio, C<sub>1</sub>-C<sub>6</sub>haloalkylsulfinyl, C<sub>1</sub>-C<sub>6</sub>haloalkylsulfonyl, oxiranyl (which may in turn be substituted by C<sub>1</sub>-C<sub>6</sub>alkyl), (3-oxetanyl)oxy (which may in turn be substituted by C<sub>1</sub>-C<sub>6</sub>alkyl), benzyloxy, benzylthio, benzylsulfinyl, benzylsulfonyl, C<sub>1</sub>-C<sub>6</sub>alkylamino, di(C<sub>1</sub>-C<sub>6</sub>alkyl)amino, R<sub>9</sub>S(O)<sub>2</sub>O-, R<sub>10</sub>N(R<sub>11</sub>)SO<sub>2</sub>-, rhodano, phenyl, phenoxy, phenylthio, phenylsulfinyl and phenylsulfonyl;

it being possible for the phenyl- or benzyl-containing groups to be in turn substituted by one or more C<sub>1</sub>-C<sub>6</sub>alkyl, C<sub>1</sub>-C<sub>6</sub>haloalkyl, C<sub>1</sub>-C<sub>6</sub>alkoxy, C<sub>1</sub>-C<sub>6</sub>haloalkoxy, halogen, cyano, hydroxy or nitro groups, or

R<sub>2</sub> is phenyl which may be substituted one or more times by C<sub>1</sub>-C<sub>6</sub>alkyl, C<sub>1</sub>-C<sub>6</sub>haloalkyl, C<sub>1</sub>-C<sub>6</sub>alkoxy, C<sub>1</sub>-C<sub>6</sub>haloalkoxy, halogen, cyano, hydroxy or by nitro; or

R<sub>2</sub> is C<sub>3</sub>-C<sub>6</sub>cycloalkyl, C<sub>1</sub>-C<sub>6</sub>alkoxy- or C<sub>1</sub>-C<sub>6</sub>alkyl-substituted C<sub>3</sub>-C<sub>6</sub>cycloalkyl, 3-oxetanyl or C<sub>1</sub>-C<sub>6</sub>alkyl-substituted 3-oxetanyl; or

R<sub>2</sub> is a three- to ten-membered, monocyclic or fused bicyclic, ring system which may be aromatic, partially saturated or fully saturated and may contain from 1 to 4 hetero atoms selected from nitrogen, oxygen, sulfur, and/or may contain the group -C(=O)-, -C(=S)-, -C(=NR<sub>19</sub>)-, -(N=O)-, -S(=O)- or -SO<sub>2</sub>-, the ring system being attached to the substituent X<sub>1</sub> either directly or by way of a C<sub>1</sub>-C<sub>4</sub>alkylene, C<sub>2</sub>-C<sub>4</sub>alkenylene, C<sub>2</sub>-C<sub>4</sub>alkynylene, -N(R<sub>12</sub>)-C<sub>1</sub>-C<sub>4</sub>alkylene, -O-C<sub>1</sub>-C<sub>4</sub>alkylene, -S-C<sub>1</sub>-C<sub>4</sub>alkylene, -SO-C<sub>1</sub>-C<sub>4</sub>alkylene or -SO<sub>2</sub>-C<sub>1</sub>-C<sub>4</sub>alkylene group and each ring system containing no more than 2 oxygen atoms and no more than two sulfur atoms, and it being possible for each ring system itself to be substituted one or more times by C<sub>1</sub>-C<sub>6</sub>alkyl, C<sub>1</sub>-C<sub>6</sub>haloalkyl, C<sub>2</sub>-C<sub>6</sub>alkenyl, C<sub>2</sub>-C<sub>6</sub>haloalkenyl, C<sub>2</sub>-C<sub>6</sub>alkynyl, C<sub>2</sub>-C<sub>6</sub>haloalkynyl, C<sub>1</sub>-C<sub>6</sub>alkoxy, C<sub>1</sub>-C<sub>6</sub>haloalkoxy, C<sub>3</sub>-C<sub>6</sub>alkenyloxy, C<sub>3</sub>-C<sub>6</sub>alkynyloxy, mercapto, amino, hydroxy, C<sub>1</sub>-C<sub>6</sub>alkylthio, C<sub>1</sub>-C<sub>6</sub>haloalkylthio, C<sub>3</sub>-C<sub>6</sub>alkenylthio, C<sub>3</sub>-C<sub>6</sub>haloalkenylthio, C<sub>3</sub>-C<sub>6</sub>alkynylthio, C<sub>1</sub>-C<sub>3</sub>alkoxy-C<sub>1</sub>-C<sub>3</sub>alkylthio, C<sub>1</sub>-C<sub>4</sub>alkylcarbonyl-C<sub>1</sub>-C<sub>3</sub>alkylthio, C<sub>1</sub>-C<sub>4</sub>alkoxycarbonyl-C<sub>1</sub>-C<sub>3</sub>alkylthio, cyano-C<sub>1</sub>-C<sub>3</sub>alkylthio, C<sub>1</sub>-C<sub>6</sub>alkylsulfinyl, C<sub>1</sub>-C<sub>6</sub>haloalkylsulfinyl, C<sub>1</sub>-C<sub>6</sub>alkylsulfonyl, C<sub>1</sub>-C<sub>6</sub>haloalkylsulfonyl, amino-sulfonyl, C<sub>1</sub>-C<sub>2</sub>alkylaminosulfonyl, N,N-di(C<sub>1</sub>-C<sub>2</sub>alkyl)aminosulfonyl, di(C<sub>1</sub>-C<sub>4</sub>alkyl)amino, halogen, cyano, nitro or by phenyl, it being possible for the phenyl group to be in turn substituted by hydroxy, C<sub>1</sub>-C<sub>6</sub>alkylthio, C<sub>1</sub>-C<sub>6</sub>haloalkylthio, C<sub>3</sub>-C<sub>6</sub>alkenylthio, C<sub>3</sub>-C<sub>6</sub>haloalkenylthio, C<sub>3</sub>-C<sub>6</sub>alkynylthio, C<sub>1</sub>-C<sub>3</sub>alkoxy-C<sub>1</sub>-C<sub>3</sub>alkylthio, C<sub>1</sub>-C<sub>4</sub>alkylcarbonyl-C<sub>1</sub>-C<sub>3</sub>alkylthio, C<sub>1</sub>-C<sub>4</sub>alkoxycarbonyl-C<sub>1</sub>-C<sub>3</sub>alkylthio, cyano-C<sub>1</sub>-C<sub>3</sub>alkylthio, C<sub>1</sub>-C<sub>6</sub>alkylsulfinyl, C<sub>1</sub>-C<sub>6</sub>haloalkylsulfinyl, C<sub>1</sub>-C<sub>6</sub>alkylsulfonyl, C<sub>1</sub>-C<sub>6</sub>haloalkylsulfonyl, aminosulfonyl, C<sub>1</sub>-C<sub>2</sub>alkylaminosulfonyl, N,N-di(C<sub>1</sub>-C<sub>2</sub>alkyl)aminosulfonyl, di(C<sub>1</sub>-C<sub>4</sub>alkyl)amino, halogen, cyano or by nitro, and the substituents on nitrogen in a heterocyclic ring being other than halogen; R<sub>5</sub> is hydroxy, C<sub>1</sub>-C<sub>6</sub>alkoxy, C<sub>3</sub>-C<sub>6</sub>cycloalkyloxy, C<sub>1</sub>-C<sub>6</sub>alkoxy-C<sub>1</sub>-C<sub>6</sub>alkoxy, C<sub>1</sub>-C<sub>6</sub>alkoxy-C<sub>1</sub>-C<sub>6</sub>alkoxy-C<sub>1</sub>-C<sub>6</sub>alkoxy or C<sub>1</sub>-C<sub>2</sub>alkylsulfonyloxy; R<sub>6</sub>, R<sub>7</sub>, R<sub>8</sub>, R<sub>9</sub>, R<sub>10</sub>, R<sub>11</sub>, R<sub>12</sub>, R<sub>17</sub>, R<sub>18</sub> and R<sub>18b</sub> are each independently of the others hydrogen, C<sub>1</sub>-C<sub>6</sub>alkyl, C<sub>1</sub>-C<sub>6</sub>haloalkyl, C<sub>1</sub>-C<sub>6</sub>alkoxycarbonyl, C<sub>1</sub>-C<sub>6</sub>alkylcarbonyl, C<sub>1</sub>-C<sub>6</sub>alkoxy-C<sub>1</sub>-C<sub>6</sub>alkyl, C<sub>1</sub>-C<sub>6</sub>alkoxy-C<sub>1</sub>-C<sub>6</sub>alkyl substituted by C<sub>1</sub>-C<sub>6</sub>alkoxy, benzyl, or phenyl, it

being possible for phenyl and benzyl to be in turn substituted one or more times by  $C_1$ - $C_6$ alkyl,  $C_1$ - $C_6$ haloalkyl,  $C_1$ - $C_6$ alkoxy,  $C_1$ - $C_6$ haloalkoxy, halogen, cyano, hydroxy or by nitro;  $R_8$  not being hydrogen when  $R_9$  is hydrogen,  $C_1$ - $C_6$ alkoxycarbonyl or  $C_1$ - $C_6$ alkylcarbonyl;

or the group  $-R_1-X_1-R_2$  together is  $C_1$ - $C_6$ alkyl,  $C_2$ - $C_6$ alkenyl,  $C_2$ - $C_6$ haloalkenyl,  $C_2$ - $C_6$ alkynyl,  $C_2$ - $C_6$ haloalkynyl,  $C_3$ - $C_6$ cycloalkyl,  $C_1$ - $C_6$ alkoxy,  $C_1$ - $C_6$ haloalkoxy,  $C_1$ - $C_6$ alkylthio,  $C_1$ - $C_6$ alkylsulfinyl,  $C_1$ - $C_6$ alkylsulfonyl,  $C_1$ - $C_6$ haloalkyl,  $C_1$ - $C_6$ haloalkylthio,  $C_1$ - $C_6$ haloalkylsulfinyl,  $C_1$ - $C_6$ haloalkylsulfonyl,  $C_1$ - $C_6$ alkoxycarbonyl,  $C_1$ - $C_6$ alkylcarbonyl,  $C_1$ - $C_6$ alkylamino, di( $C_1$ - $C_6$ alkyl)amino,  $C_1$ - $C_6$ alkylaminosulfonyl, di( $C_1$ - $C_6$ alkyl)aminosulfonyl,  $-NH-S-R_{13}$ ,  $-N-(C_1-C_4alkylthio)-R_{13}$ ,  $-NH-SO-R_{14}$ ,  $-N-(C_1-C_4alkylsulfonyl)-R_{14}$ ,  $-NH-SO_2-R_{15}$ ,  $-N-(C_1-C_4alkylsulfonyl)-R_{15}$ , nitro, cyano, halogen, hydroxy, amino, formyl, rhodano- $C_1$ - $C_6$ alkyl, cyano- $C_1$ - $C_6$ alkyl, oxiranyl,  $C_3$ - $C_6$ alkenyloxy,  $C_3$ - $C_6$ alkynyloxy,  $C_1$ - $C_6$ alkoxy- $C_1$ - $C_6$ alkoxy, cyano- $C_1$ - $C_6$ alkenyloxy,  $C_1$ - $C_6$ alkoxycarbonyloxy- $C_1$ - $C_6$ alkoxy,  $C_3$ - $C_6$ alkynyloxy, cyano- $C_1$ - $C_6$ alkoxy,  $C_1$ - $C_6$ alkoxycarbonyl- $C_1$ - $C_6$ alkoxy,  $C_1$ - $C_6$ alkylthio- $C_1$ - $C_6$ alkoxy,  $C_1$ - $C_6$ alkoxycarbonyl- $C_1$ - $C_6$ alkylthio,  $C_1$ - $C_6$ alkoxycarbonyl- $C_1$ - $C_6$ alkylsulfinyl,  $C_1$ - $C_6$ alkoxycarbonyl- $C_1$ - $C_6$ alkylsulfonyl,  $C_1$ - $C_6$ alkylsulfonyloxy,  $C_1$ - $C_6$ haloalkylsulfonyloxy, phenyl, benzyl, phenoxy, phenylthio, phenylsulfinyl, phenylsulfonyl, benzylthio, benzylsulfinyl or benzylsulfonyl, it being possible for the phenyl groups to be substituted one or more times by halogen, methyl, ethyl, trifluoromethyl, methoxy or by nitro; or the group  $-R_1-X_1-R_2$  together is a three- to ten-membered, monocyclic or fused bicyclic, ring system, which may be aromatic, partially saturated or saturated and which may contain from 1 to 4 hetero atoms selected from nitrogen, oxygen and sulfur and/or may contain one or two groups selected from  $-C(=O)-$ ,  $-C(=S)-$ ,  $-C(=NR_{20})-$ ,  $-(N=O)-$ ,  $-S(=O)-$  and  $-SO_2-$ , the ring system either being attached to the pyridine ring directly via a carbon atom or being attached to the pyridine ring via a carbon atom or via a nitrogen atom by way of a  $C_1$ - $C_4$ alkylene,  $C_2$ - $C_4$ alkenyl or  $C_2$ - $C_4$ alkynyl chain, and it being possible for each ring system to contain no more than 2 oxygen atoms and no more than two sulfur atoms, and it being possible for the ring system itself to be substituted one, two or three times by substituents selected from  $C_1$ - $C_6$ alkyl,  $C_1$ - $C_6$ haloalkyl,  $C_3$ - $C_6$ alkenyl,  $C_3$ - $C_6$ haloalkenyl,  $C_3$ - $C_6$ alkynyl,  $C_3$ - $C_6$ haloalkynyl,  $C_3$ - $C_6$ cycloalkyl, hydroxy,  $C_1$ - $C_6$ alkoxy,  $C_1$ - $C_6$ haloalkoxy,  $C_3$ - $C_6$ alkenyloxy,  $C_3$ - $C_6$ alkynyloxy, mercapto,  $C_1$ - $C_6$ alkylthio,  $C_1$ - $C_6$ haloalkylthio,  $C_3$ - $C_6$ alkenylthio,  $C_3$ - $C_6$ haloalkenylthio,  $C_3$ - $C_6$ alkynylthio,  $C_1$ - $C_3$ alkoxy- $C_1$ - $C_3$ alkylthio,  $C_1$ - $C_3$ alkylcarbonyl- $C_1$ - $C_3$ alkylthio,  $C_1$ - $C_4$ alkoxycarbonyl- $C_1$ - $C_3$ alkylthio, cyano- $C_1$ - $C_3$ alkylthio,  $C_1$ - $C_6$ alkylsulfinyl,  $C_1$ - $C_6$ haloalkylsulfinyl,  $C_1$ - $C_6$ alkylsulfonyl,  $C_1$ - $C_6$ haloalkylsulfonyl,

aminosulfonyl, C<sub>1</sub>-C<sub>2</sub>alkylaminosulfonyl, di(C<sub>1</sub>-C<sub>6</sub>alkyl)aminosulfonyl, C<sub>1</sub>-C<sub>3</sub>alkylene-R<sub>16</sub>, amino, C<sub>1</sub>-C<sub>6</sub>alkylamino, C<sub>1</sub>-C<sub>6</sub>alkoxyamino, di(C<sub>1</sub>-C<sub>6</sub>alkyl)amino, (N-C<sub>1</sub>-C<sub>6</sub>alkyl)-C<sub>1</sub>-C<sub>6</sub>alkoxyamino, halogen, cyano, nitro, phenyl, benzyloxy and benzylthio, it being possible for phenyl, benzyloxy and benzylthio to be in turn substituted on the phenyl ring by C<sub>1</sub>-C<sub>3</sub>alkyl, C<sub>1</sub>-C<sub>3</sub>haloalkyl, C<sub>1</sub>-C<sub>3</sub>alkoxy, C<sub>1</sub>-C<sub>3</sub>haloalkoxy, halogen, cyano or by nitro, and substituents on a nitrogen atom in a heterocyclic ring being other than halogen;

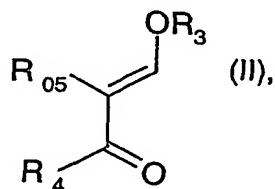
R<sub>13</sub> is N(H)-C<sub>1</sub>-C<sub>6</sub>alkyl, N(H)-C<sub>1</sub>-C<sub>6</sub>alkoxy, N-(C<sub>1</sub>-C<sub>6</sub>alkyl)-C<sub>1</sub>-C<sub>6</sub>alkyl, N-(C<sub>1</sub>-C<sub>6</sub>alkyl)-C<sub>1</sub>-C<sub>6</sub>alkoxy, C<sub>1</sub>-C<sub>6</sub>alkoxy, C<sub>1</sub>-C<sub>6</sub>haloalkoxy, C<sub>1</sub>-C<sub>6</sub>alkyl, C<sub>1</sub>-C<sub>6</sub>haloalkyl, C<sub>3</sub>-C<sub>6</sub>alkenyl, C<sub>3</sub>-C<sub>6</sub>haloalkenyl, C<sub>3</sub>-C<sub>6</sub>alkynyl, C<sub>3</sub>-C<sub>6</sub>haloalkynyl, C<sub>3</sub>-C<sub>6</sub>cycloalkyl or phenyl, it being possible for phenyl to be in turn substituted by C<sub>1</sub>-C<sub>3</sub>alkyl, C<sub>1</sub>-C<sub>3</sub>haloalkyl, C<sub>1</sub>-C<sub>3</sub>alkoxy, C<sub>1</sub>-C<sub>3</sub>haloalkoxy, halogen, cyano or by nitro;

R<sub>14</sub> is N(H)-C<sub>1</sub>-C<sub>6</sub>alkyl, N(H)-C<sub>1</sub>-C<sub>6</sub>alkoxy, N-(C<sub>1</sub>-C<sub>6</sub>alkyl)-C<sub>1</sub>-C<sub>6</sub>alkyl, N-(C<sub>1</sub>-C<sub>6</sub>alkyl)-C<sub>1</sub>-C<sub>6</sub>alkoxy, C<sub>1</sub>-C<sub>6</sub>alkoxy, C<sub>1</sub>-C<sub>6</sub>haloalkoxy, C<sub>1</sub>-C<sub>6</sub>alkyl, C<sub>1</sub>-C<sub>6</sub>haloalkyl, C<sub>3</sub>-C<sub>6</sub>alkenyl, C<sub>3</sub>-C<sub>6</sub>haloalkenyl, C<sub>3</sub>-C<sub>6</sub>alkynyl, C<sub>3</sub>-C<sub>6</sub>haloalkynyl, C<sub>3</sub>-C<sub>6</sub>cycloalkyl or phenyl, it being possible for phenyl to be in turn substituted by C<sub>1</sub>-C<sub>3</sub>alkyl, C<sub>1</sub>-C<sub>3</sub>haloalkyl, C<sub>1</sub>-C<sub>3</sub>alkoxy, C<sub>1</sub>-C<sub>3</sub>haloalkoxy, halogen, cyano or by nitro;

R<sub>15</sub> is N(H)-C<sub>1</sub>-C<sub>6</sub>alkyl, N(H)-C<sub>1</sub>-C<sub>6</sub>alkoxy, N-(C<sub>1</sub>-C<sub>6</sub>alkyl)-C<sub>1</sub>-C<sub>6</sub>alkyl, N-(C<sub>1</sub>-C<sub>6</sub>alkyl)-C<sub>1</sub>-C<sub>6</sub>alkoxy, C<sub>1</sub>-C<sub>6</sub>alkoxy, C<sub>1</sub>-C<sub>6</sub>haloalkoxy, C<sub>1</sub>-C<sub>6</sub>alkyl, C<sub>1</sub>-C<sub>6</sub>haloalkyl, C<sub>3</sub>-C<sub>6</sub>alkenyl, C<sub>3</sub>-C<sub>6</sub>haloalkenyl, C<sub>3</sub>-C<sub>6</sub>alkynyl, C<sub>3</sub>-C<sub>6</sub>haloalkynyl, C<sub>3</sub>-C<sub>6</sub>cycloalkyl or phenyl, it being possible for phenyl to be in turn substituted by C<sub>1</sub>-C<sub>3</sub>alkyl, C<sub>1</sub>-C<sub>3</sub>haloalkyl, C<sub>1</sub>-C<sub>3</sub>alkoxy, C<sub>1</sub>-C<sub>3</sub>haloalkoxy, halogen, cyano or by nitro;

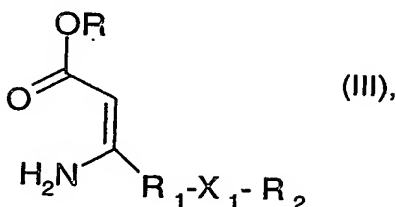
R<sub>16</sub> is C<sub>1</sub>-C<sub>3</sub>alkoxy, C<sub>2</sub>-C<sub>4</sub>alkoxycarbonyl, C<sub>1</sub>-C<sub>3</sub>alkylthio, C<sub>1</sub>-C<sub>3</sub>alkylsulfinyl, C<sub>1</sub>-C<sub>3</sub>alkylsulfonyl or phenyl, it being possible for phenyl to be in turn substituted by C<sub>1</sub>-C<sub>3</sub>alkyl, C<sub>1</sub>-C<sub>3</sub>haloalkyl, C<sub>1</sub>-C<sub>3</sub>alkoxy, C<sub>1</sub>-C<sub>3</sub>haloalkoxy, halogen, cyano or by nitro; and

R<sub>19</sub> and R<sub>20</sub> are each independently of the other hydrogen, hydroxy, C<sub>1</sub>-C<sub>6</sub>alkyl, C<sub>1</sub>-C<sub>6</sub>haloalkyl, C<sub>1</sub>-C<sub>6</sub>alkoxy, cyano, C<sub>1</sub>-C<sub>6</sub>alkylcarbonyl, C<sub>1</sub>-C<sub>6</sub>alkoxycarbonyl or C<sub>1</sub>-C<sub>6</sub>alkylsulfonyl; which process comprises reacting a compound of formula II



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wherein  $R_3$  is  $C_1$ - $C_8$ alkyl or  $C_3$ - $C_6$ cycloalkyl and  $R_4$  and  $R_{05}$  are as defined for formula I, with a compound of formula III



wherein  $R$ ,  $R_1$ ,  $R_2$  and  $X_1$  are as defined for formula I, in an inert solvent in the presence of a proton source.

2. A process according to claim 1, wherein there is prepared a compound of formula I wherein

$R_4$  is halomethyl or haloethyl;

$R_{05}$  is hydrogen;

$X_1$  is oxygen,  $-O(CO)-$ ,  $-(CO)O-$ ,  $-O(CO)O-$ ,  $-N(R_6)-O-$ ,  $-O-NR_{17}-$ , thio, sulfinyl, sulfonyl,  $-SO_2NR_{17}-$ ,  $-NR_{18}SO_2-$  or  $-NR_8-$ ;

$R_2$  is hydrogen or  $C_1$ - $C_8$ alkyl, or a  $C_1$ - $C_8$ alkyl,  $C_3$ - $C_6$ alkenyl or  $C_3$ - $C_6$ alkynyl group which is substituted one or more times by halogen, hydroxy, amino, formyl, nitro, cyano, mercapto, carbamoyl,  $C_1$ - $C_6$ alkoxy,  $C_1$ - $C_6$ alkoxycarbonyl,  $C_2$ - $C_6$ alkenyl,  $C_2$ - $C_6$ haloalkenyl,  $C_2$ - $C_6$ alkynyl,  $C_2$ - $C_6$ haloalkynyl,  $C_3$ - $C_6$ cycloalkyl, halo-substituted  $C_3$ - $C_6$ cycloalkyl, or by  $C_3$ - $C_6$ alkenyloxy,  $C_3$ - $C_6$ alkynyloxy,  $C_1$ - $C_6$ haloalkoxy,  $C_3$ - $C_6$ haloalkenyloxy, cyano- $C_1$ - $C_6$ alkoxy,  $C_1$ - $C_6$ alkoxy- $C_1$ - $C_6$ alkoxy,  $C_1$ - $C_6$ alkoxy- $C_1$ - $C_6$ alkoxy- $C_1$ - $C_6$ alkoxy,  $C_1$ - $C_6$ alkylthio- $C_1$ - $C_6$ alkoxy,  $C_1$ - $C_6$ alkylsulfinyl- $C_1$ - $C_6$ alkoxy,  $C_1$ - $C_6$ alkylsulfonyl- $C_1$ - $C_6$ alkoxy,  $C_1$ - $C_6$ alkoxycarbonyl- $C_1$ - $C_6$ alkoxy,  $C_1$ - $C_6$ alkoxycarbonyl,  $C_1$ - $C_6$ alkylcarbonyl,  $C_1$ - $C_6$ alkylthio,  $C_1$ - $C_6$ alkylsulfinyl,  $C_1$ - $C_6$ alkylsulfonyl,  $C_1$ - $C_6$ haloalkylthio,  $C_1$ - $C_6$ haloalkylsulfinyl,  $C_1$ - $C_6$ haloalkylsulfonyl, oxiranyl (which may in turn be substituted by  $C_1$ - $C_6$ alkyl), or by (3-oxetanyl)oxy (which may in turn be substituted by  $C_1$ - $C_6$ alkyl), or by benzylthio, benzylsulfinyl, benzylsulfonyl,  $C_1$ - $C_6$ alkylamino, di( $C_1$ - $C_6$ alkyl)amino,  $R_9S(O)_2O-$ ,  $R_{10}N(R_{11})SO_2-$ , rhodano, phenyl, phenoxy, phenylthio, phenylsulfinyl or by phenylsulfonyl; it being possible for the phenyl- or benzyl-containing groups to be in turn substituted by one or more  $C_1$ - $C_6$ alkyl,  $C_1$ - $C_6$ haloalkyl,  $C_1$ - $C_6$ alkoxy,  $C_1$ - $C_6$ haloalkoxy, halogen, cyano, hydroxy or nitro groups, or

$R_2$  is phenyl which may be substituted one or more times by  $C_1$ - $C_6$ alkyl,  $C_1$ - $C_6$ haloalkyl,  $C_1$ - $C_6$ alkoxy,  $C_1$ - $C_6$ haloalkoxy, halogen, cyano, hydroxy or by nitro; or

$R_2$  is  $C_3$ - $C_6$ cycloalkyl,  $C_1$ - $C_6$ alkoxy- or  $C_1$ - $C_6$ alkyl-substituted  $C_3$ - $C_6$ cycloalkyl, 3-oxetanyl or  $C_1$ - $C_6$ alkyl-substituted 3-oxetanyl;

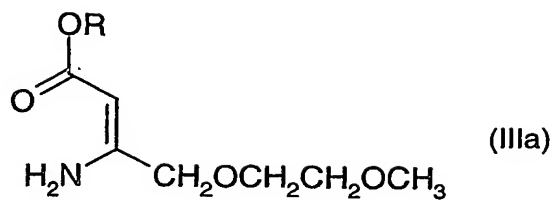
or  $R_2$  is a five- to ten-membered, monocyclic or fused bicyclic, ring system which may be aromatic, partially saturated or fully saturated and may contain from 1 to 4 hetero atoms selected from nitrogen, oxygen, sulfur, and/or may contain the group  $-C(=O)-$ ,  $-C(=S)-$ ,  $-C(=NR_{19})-$ ,  $-(N=O)-$ ,  $-S(=O)-$  or  $-SO_2-$ , the ring system being attached to the substituent  $X_1$  directly or by way of a  $C_1$ - $C_4$ alkylene,  $C_2$ - $C_4$ alkenyl- $C_1$ - $C_4$ alkylene,  $C_2$ - $C_4$ alkynyl- $C_1$ - $C_4$ alkylene,  $-N(R_{12})$ - $C_1$ - $C_4$ alkylene,  $-SO$ - $C_1$ - $C_4$ alkylene or  $-SO_2$ - $C_1$ - $C_4$ alkylene group and each ring system containing no more than 2 oxygen atoms and no more than two sulfur atoms, and it being possible for each ring system itself to be substituted one or more times by  $C_1$ - $C_6$ alkyl,  $C_1$ - $C_6$ haloalkyl,  $C_2$ - $C_6$ alkenyl,  $C_2$ - $C_6$ haloalkenyl,  $C_2$ - $C_6$ alkynyl,  $C_2$ - $C_6$ haloalkynyl,  $C_1$ - $C_6$ alkoxy,  $C_1$ - $C_6$ haloalkoxy,  $C_3$ - $C_6$ alkenyloxy,  $C_3$ - $C_6$ alkynyloxy, mercapto, amino, hydroxy,  $C_1$ - $C_6$ alkylthio,  $C_1$ - $C_6$ haloalkylthio,  $C_3$ - $C_6$ alkenylthio,  $C_3$ - $C_6$ haloalkenylthio,  $C_3$ - $C_6$ alkynylthio,  $C_1$ - $C_3$ alkoxy- $C_1$ - $C_3$ alkylthio,  $C_1$ - $C_4$ alkylcarbonyl- $C_1$ - $C_3$ alkylthio,  $C_1$ - $C_4$ alkoxycarbonyl- $C_1$ - $C_3$ alkylthio, cyano- $C_1$ - $C_3$ alkylthio,  $C_1$ - $C_6$ alkylsulfinyl,  $C_1$ - $C_6$ haloalkylsulfinyl,  $C_1$ - $C_6$ alkylsulfonyl,  $C_1$ - $C_6$ haloalkylsulfonyl, aminosulfonyl,  $C_1$ - $C_2$ alkylaminosulfonyl,  $N,N$ -di( $C_1$ - $C_2$ alkyl)aminosulfonyl, di( $C_1$ - $C_4$ alkyl)amino, halogen, cyano, nitro or by phenyl, it being possible for the phenyl group to be in turn substituted by hydroxy,  $C_1$ - $C_6$ alkylthio,  $C_1$ - $C_6$ haloalkylthio,  $C_3$ - $C_6$ alkenylthio,  $C_3$ - $C_6$ haloalkenylthio,  $C_3$ - $C_6$ alkynylthio,  $C_1$ - $C_3$ alkoxy- $C_1$ - $C_3$ alkylthio,  $C_1$ - $C_4$ alkylcarbonyl- $C_1$ - $C_3$ alkylthio,  $C_1$ - $C_4$ alkoxycarbonyl- $C_1$ - $C_3$ alkylthio, cyano- $C_1$ - $C_3$ alkylthio,  $C_1$ - $C_6$ alkylsulfinyl,  $C_1$ - $C_6$ haloalkylsulfinyl,  $C_1$ - $C_6$ alkylsulfonyl,  $C_1$ - $C_6$ haloalkylsulfonyl, aminosulfonyl,  $C_1$ - $C_2$ alkylaminosulfonyl,  $N,N$ -di( $C_1$ - $C_2$ alkyl)aminosulfonyl, di( $C_1$ - $C_4$ alkyl)amino, halogen, cyano or by nitro, and the substituents on nitrogen in a heterocyclic ring being other than halogen;

$R_6$ ,  $R_7$ ,  $R_8$ ,  $R_9$ ,  $R_{10}$ ,  $R_{11}$ ,  $R_{12}$ ,  $R_{17}$  and  $R_{18}$  are each independently of the others hydrogen,  $C_1$ - $C_6$ alkyl,  $C_1$ - $C_6$ haloalkyl,  $C_1$ - $C_6$ alkoxycarbonyl,  $C_1$ - $C_6$ alkylcarbonyl,  $C_1$ - $C_6$ alkoxy- $C_1$ - $C_6$ alkyl,  $C_1$ - $C_6$ alkoxy- $C_1$ - $C_6$ alkyl substituted by  $C_1$ - $C_6$ alkoxy, benzyl, or phenyl, it being possible for phenyl and benzyl to be in turn substituted one or more times by  $C_1$ - $C_6$ alkyl,  $C_1$ - $C_6$ haloalkyl,  $C_1$ - $C_6$ alkoxy,  $C_1$ - $C_6$ haloalkoxy, halogen, cyano, hydroxy or by nitro;  $R_6$  not being hydrogen when  $R_9$  is hydrogen,  $C_1$ - $C_6$ alkoxycarbonyl or  $C_1$ - $C_6$ alkylcarbonyl;

or the group  $-R_1-X_1-R_2$  together is  $C_1$ - $C_6$ alkyl,  $C_2$ - $C_6$ alkenyl,  $C_2$ - $C_6$ haloalkenyl,  $C_2$ - $C_6$ alkynyl,  $C_2$ - $C_6$ haloalkynyl,  $C_3$ - $C_6$ cycloalkyl,  $C_1$ - $C_6$ alkoxy,  $C_1$ - $C_6$ haloalkoxy,  $C_1$ - $C_6$ alkylthio,  $C_1$ - $C_6$ alkylsulfinyl,  $C_1$ - $C_6$ alkylsulfonyl,  $C_1$ - $C_6$ haloalkyl,  $C_1$ - $C_6$ haloalkylthio,  $C_1$ - $C_6$ haloalkylsulfinyl,  $C_1$ - $C_6$ haloalkylsulfonyl,  $C_1$ - $C_6$ alkoxycarbonyl,  $C_1$ - $C_6$ alkylcarbonyl,  $C_1$ - $C_6$ alkylamino,

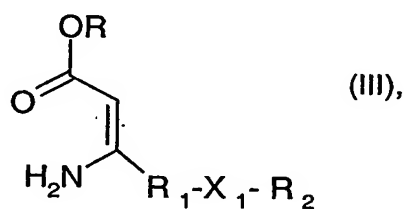
di(C<sub>1</sub>-C<sub>6</sub>alkyl)amino, C<sub>1</sub>-C<sub>6</sub>alkylaminosulfonyl, di(C<sub>1</sub>-C<sub>6</sub>alkyl)aminosulfonyl, -NH-S-R<sub>13</sub>,  
 -N<sub>1</sub>-(C<sub>1</sub>-C<sub>4</sub>alkylthio)-R<sub>13</sub>, -NH-SO-R<sub>14</sub>, -N-(C<sub>1</sub>-C<sub>4</sub>alkylsulfonyl)-R<sub>14</sub>, -NH-SO<sub>2</sub>-R<sub>15</sub>,  
 -N-(C<sub>1</sub>-C<sub>4</sub>alkylsulfonyl)-R<sub>15</sub>, nitro, cyano, halogen, hydroxy, amino, formyl, rhodano-  
 C<sub>1</sub>-C<sub>6</sub>alkyl, cyano-C<sub>1</sub>-C<sub>6</sub>alkyl, oxiranyl, C<sub>3</sub>-C<sub>6</sub>alkenyloxy, C<sub>3</sub>-C<sub>6</sub>alkynyloxy, C<sub>1</sub>-C<sub>6</sub>alkoxy-  
 C<sub>1</sub>-C<sub>6</sub>alkoxy, cyano-C<sub>1</sub>-C<sub>6</sub>alkenyloxy, C<sub>1</sub>-C<sub>6</sub>alkoxycarbonyloxy-C<sub>1</sub>-C<sub>6</sub>alkoxy, C<sub>3</sub>-C<sub>6</sub>alkynyl-  
 oxy, cyano-C<sub>1</sub>-C<sub>6</sub>alkoxy, C<sub>1</sub>-C<sub>6</sub>alkoxycarbonyl-C<sub>1</sub>-C<sub>6</sub>alkoxy, C<sub>1</sub>-C<sub>6</sub>alkylthio-C<sub>1</sub>-C<sub>6</sub>alkoxy,  
 alkoxycarbonyl-C<sub>1</sub>-C<sub>6</sub>alkylthio, alkoxycarbonyl-C<sub>1</sub>-C<sub>6</sub>alkylsulfinyl, alkoxycarbonyl-  
 C<sub>1</sub>-C<sub>6</sub>alkylsulfonyl, C<sub>1</sub>-C<sub>6</sub>alkylsulfonyloxy, C<sub>1</sub>-C<sub>6</sub>haloalkylsulfonyloxy, phenyl, benzyl,  
 phenoxy, phenylthio, phenylsulfinyl, phenylsulfonyl, benzylthio, benzylsulfinyl or  
 benzylsulfonyl, it being possible for the phenyl groups to be substituted one or more times  
 by halogen, methyl, ethyl, trifluoromethyl, methoxy or by nitro;  
 or the group -R<sub>1</sub>-X<sub>1</sub>-R<sub>2</sub> together is a five- to ten-membered, monocyclic or fused bicyclic,  
 ring system, which may be aromatic or partially saturated and which may contain from 1 to  
 4 hetero atoms selected from nitrogen, oxygen and sulfur, the ring system either being  
 directly attached to the pyridine ring or being attached to the pyridine ring by way of a  
 C<sub>1</sub>-C<sub>4</sub>alkylene group, and it being possible for each ring system to contain no more than  
 2 oxygen atoms and no more than two sulfur atoms, and/or to contain the group -C(=O)-,  
 -C(=S)-, -C(=NR<sub>20</sub>)-, -(N=O)-, -S(=O)- or -SO<sub>2</sub>-;  
 and the ring system itself may be substituted one, two or three times by C<sub>1</sub>-C<sub>6</sub>alkyl, C<sub>1</sub>-C<sub>6</sub>-  
 haloalkyl, C<sub>3</sub>-C<sub>6</sub>alkenyl, C<sub>3</sub>-C<sub>6</sub>haloalkenyl, C<sub>3</sub>-C<sub>6</sub>alkynyl, C<sub>3</sub>-C<sub>6</sub>haloalkynyl, C<sub>1</sub>-C<sub>6</sub>alkoxy,  
 C<sub>1</sub>-C<sub>6</sub>haloalkoxy, C<sub>3</sub>-C<sub>6</sub>alkenyloxy, C<sub>3</sub>-C<sub>6</sub>alkynyloxy, mercapto, C<sub>1</sub>-C<sub>6</sub>alkylthio, C<sub>1</sub>-C<sub>6</sub>-  
 haloalkylthio, C<sub>3</sub>-C<sub>6</sub>alkenylthio, C<sub>3</sub>-C<sub>6</sub>haloalkenylthio, C<sub>3</sub>-C<sub>6</sub>alkynylthio, C<sub>2</sub>-C<sub>5</sub>alkoxyalkyl-  
 thio, C<sub>3</sub>-C<sub>5</sub>acetylalkylthio, C<sub>3</sub>-C<sub>6</sub>alkoxycarbonylalkylthio, C<sub>2</sub>-C<sub>4</sub>cyanoalkylthio, C<sub>1</sub>-C<sub>6</sub>alkyl-  
 sulfinyl, C<sub>1</sub>-C<sub>6</sub>haloalkylsulfinyl, C<sub>1</sub>-C<sub>6</sub>alkylsulfonyl, C<sub>1</sub>-C<sub>6</sub>haloalkylsulfonyl, aminosulfonyl,  
 C<sub>1</sub>-C<sub>2</sub>alkylaminosulfonyl, C<sub>2</sub>-C<sub>4</sub>dialkylaminosulfonyl, C<sub>1</sub>-C<sub>3</sub>alkylene-R<sub>16</sub>, N(H)-C<sub>1</sub>-C<sub>6</sub>alkyl,  
 N(H)-C<sub>1</sub>-C<sub>6</sub>alkoxy, N-(C<sub>1</sub>-C<sub>6</sub>alkyl)-C<sub>1</sub>-C<sub>6</sub>alkyl, N-(C<sub>1</sub>-C<sub>6</sub>alkyl)-C<sub>1</sub>-C<sub>6</sub>alkoxy, halogen, cyano,  
 nitro, phenyl and by benzylthio, it being possible for phenyl and benzylthio to be in turn  
 substituted on the phenyl ring by C<sub>1</sub>-C<sub>3</sub>alkyl, C<sub>1</sub>-C<sub>3</sub>haloalkyl, C<sub>1</sub>-C<sub>3</sub>alkoxy, C<sub>1</sub>-C<sub>3</sub>haloalkoxy,  
 halogen, cyano or by nitro, and substituents on nitrogen in a heterocyclic ring being other  
 than halogen; and  
 R<sub>19</sub> and R<sub>20</sub> are each independently of the other hydrogen, hydroxy, C<sub>1</sub>-C<sub>6</sub>alkyl, C<sub>1</sub>-C<sub>6</sub>-  
 haloalkyl, C<sub>1</sub>-C<sub>6</sub>alkoxy, C<sub>1</sub>-C<sub>6</sub>alkylcarbonyl, C<sub>1</sub>-C<sub>6</sub>alkoxycarbonyl or C<sub>1</sub>-C<sub>6</sub>alkylsulfonyl.

3. A compound of formula IIIa



wherein R is as defined for formula I in claim 1.

4. Use of a compound of formula III



wherein R, R<sub>1</sub>, R<sub>2</sub> and X<sub>1</sub> are as defined for formula I in claim 1, in the preparation of a compound of formula I according to claim 1.